

POWER RAILS GLITCH NOISE INSENSITIVE CHARGE PUMP

Abstract

5 A the charge pump suitable for use in phase-locked loop (PLL) circuits employed by
mixed signal integrated circuits (IC) is disclosed. The PLL charge pump includes a constant
current source that generates constant current source references with high power supply
rejection for the P- and N-channel devices of the charge pump. Pass-gate transistors are
inserted between the output terminals and the drains of the respective P- and N-channel
10 devices. The switching transients power supply and ground are confined to the turn on/off
leads of the pass-gate transistors and, thus, are isolated from the constant current source P-
and N-channel devices. In exemplary embodiments of the invention, the constant current of
the P- and N-channel devices may be made programmable and used for controlling the range
of the current controlled oscillator of the PLL circuit.

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